The Right to Repair: (Re)building a better future

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WHAT IS THE RIGHT TO REPAIR?

A movement hinged upon fighting for the ability to fix, modify, and tinker with the goods that are rightfully ours as consumers and businesspeople.

Movement goals:

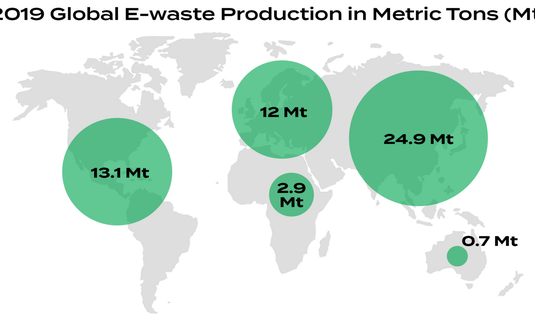
- To regain complete authority over our technological goods (phones, laptops, appliances, medical equipment like ventilators, agricultural equipment like tractors, etc.) and restore the repair industry to its former glory.
- To increase fair repair accessibility for people of all economic, social, and cultural backgrounds, thus increasing healthy market activity, and empowering and including consumers of all socioeconomic backgrounds.
- To minimize (e-)waste by extending useful life of products, thus keeping them out of landfills for longer.

- **Research goals:** To take a multi-faceted, interdisciplinary approach to research and examine the Right to Repair movement's progress, current repair practices, impediments, and imperatives, and the various large-scale implications (environmental, economic, social, etc.) stemming from diminished consumer freedom as a result of increased corporate greed and lack of governmental regulations with regards to repair and the environment.
- Some industries and sectors that are affected and/or implicated into this movement include agriculture, healthcare, automotive, military, technology, government, and more. However, repair affects everyone, not just corporations.
- Over the years, Original Equipment Manufacturers (OEMs) have monopolized the repair process for money-making purposes, making it as expensive, infuriating, and time-consuming as possible for consumers.

Some common profit-oriented, anti-competitive tactics employed by OEMs that affect consumers and businesses:

- Planned obsolescence (forced device slowdown, depleting product batteries and lifespans, phasing out older models, intentionally designing products with short lifespans)
- Charging more for repair
- Privatizing repair and diagnostic manuals
- Not selling replacement parts and repair tools to the public
- Avoiding removeable components from electronics through finicky design choices, such as gluing and soldering parts as opposed to using screws
- Suing third-party repair companies or regular people who attempt to repair devices themselves due to copyright law
- Retracting warranties or making them unaffordable
- Limiting the number of repairs and/or denying customers repair
- Deliberately taking too much time to repair devices

2019 Global E-waste Production in Metric Tons (Mt)

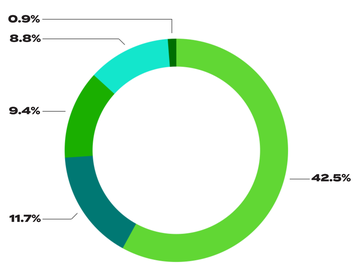


Source: The United Nations' Global E-Waste Report 2020

- **53.6 Mt** of e-waste total produced in **2019**
- **43.7 Mt** (**82.6%**) unknown, undocumented e-waste (traded, recycled, dumped illegally)
- **9.3 Mt** (**17.4%**) formally recycled globally
- **74.7 Mt** estimated to be produced by **2030**
- **0.6 Mt** estimated to have ended up in residual waste bins in EU countries

Percentage of E-waste Recycled by Continent in 2019

These numbers reflect a more sinister reality and inherent privileges possessed by 'developed' countries; extant or more resources and income for recycling and disposal, and the means to expel and relegate their e-waste. The leading recyclers also tend to dispose of their e-waste - often illegally - in developing countries, using them as dumping grounds.



Source: The UN's Global E-Waste Report 2020

ACKNOWLEDGEMENTS

I would like to thank the USRI's partners – Western Research, Western Libraries, and Student Experience – for making this incredible opportunity possible. I would also like to thank FIMS' very own Dr. Sandra Smeltzer for recommending me to participate in this program and facillitating my match with my supervisor. Last but certainly not least, thank you immensely to my supervisor, Dr. Alissa Centivany, for supporting me and teaching me so much in such a short amount of time, giving me a great deal of freedom to shape the project, and believing in me the whole way through.

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WHY DOES REPAIR MATTER?

i. Economic Factors

- The only parties that stand to benefit financially from obstructing repair and touting replacement are governments and large corporations dominating the market, employing the aforementioned manipulative tactics to ensure hegemony over the market and continue generating revenue.
  - Everyone else (consumers and smaller, independent, and local businesses) loses money.
- Repairing broken products and buying them used is far less expensive than buying them new.
  - The United States' Public Interest Research Group (U.S. PIRG) recently found that consistently repairing products could save Americans $40 billion USD per year ($330 USD annually per family).
  - This number could be indicative of larger worldwide savings, and demonstrates what unnecessary repair monopolization has cost consumers over the years.
- Repair supports and strengthens local economies and workers, and enables resale markets. It creates jobs, encourages healthy market competition, and allows independent businesses to generate revenue and help the wider public, ultimately helping local consumers to save money that would otherwise be spent on new products.
  - In 2018, a CBC reporter handed Right to Repair proponent and independent technician Louis Rossmann a Macbook Pro. Apple Store in Toronto's estimated repair costs: $1200 CAD. Rossmann unscrewed the bottom, bent a pin back, and stated that such a minute repair would be free, unless the customer needed a cable replacement. Depending on the model and difficulty of opening it, it could cost anywhere from $75 to $100.
  - In an Aug. 2021 policy insight report, Green Alliance found that regularly repairing, reusing, and recycling goods could create 450,000 green jobs in the UK by 2035.
- Repair is inclusionary; it allows lower income consumers to participate in the economy.
  - High costs that accompany repair restraints disproportionately exclude the poor. Periodically replacing working or somewhat damaged products is not a fiscally viable option for lower income communities.
  - This was worsened by the pandemic. In Apr. 2020, 53% of Canadians were within $200 of not being able to cover bills and debt payments - paying for repair simply adds monetary stress.
- Endless manipulative, profit-driven strategies have made us forget that fixing purchased or owned products once was, and should still be, a consumer right.

ii. Sociocultural Factors

- New ways of sharing every aspect of our lives on social media have promoted and perpetuated a global throwaway culture; one of excess, rapid replacement, and conspicuous consumption.
  - Currently over 1 billion active iPhones. Apple has seen more upgraders than ever before. In 2020, upgraders set an all-time record in China. These statistics point toward consumers' changing consumption patterns – the preference of 'newness'.
  - Consumption patterns in high-income countries are especially harmful: in Europe and North America, the average mobile phone is replaced every 2 years or less.
  - Think of YouTube hauls and celebrities promoting unattainable, exorbitant lifestyles; in this society, we are conditioned to replace our possessions and yearn for the newest technology. When goods are even slightly damaged, our first instinct is to replace them – OEMs have worked hard for years to make this a reflex, and to make repair a secondary thought.
- COVID-19 was labeled the 'great equalizer', but affected certain communities disproportionately (Black, Indigenous, and People of Color [BIPOC], refugees, immigrants, domestic abuse victims, low income communities, developing nations, homeless people, disabled people, the elderly, individuals with mental and physical illnesses, etc.) and created a social and digital divide around the world.
  - The pandemic revealed repair's importance – these communities' problems were exacerbated by the lack of access to repair and increased financial instability engendered by COVID-19, which acted as further stressors for these previously vulnerable groups.
  - Many students and working individuals were left without working laptops and Wi-Fi, often while struggling to pay rent. Appliances broke down, hospital patients' lives were endangered as a result of ventilator manufacturers withholding repair documentation, and thousands of disabled people's lives were threatened due to broken equipment that they could not repair.
  - It was not merely a matter of affording repair, but being able to access it during rounds of lockdown and structural and economic turmoil, consequently worsening their problems and leaving millions lacking the tools necessary to work, live, and participate equally in society.
  - If not fixed, these issues will have long-term social implications – learning and earning gaps and losses, problems with social and psychological development, reduced life opportunities, and much more, which could eventually lead to health consequences.
- Millions of people falling sick with COVID-19 made for frequent hospital backlogs and medical equipment failures and shortages. Repair restrictions on hospital equipment made things difficult for staff and patients.
  - Even if easily fixable, many ventilators and their repair manuals could not legally be accessed by staff or third party technicians. Staff had to wait hours to weeks for official technicians to fix them, causing immense stress, long hospital backlogs, and thinning the line between life and death for hundreds of thousands of patients.
- Repair fosters creativity, innovation, learning, problem-solving, community, and refines cognitive and motor skills. When it is restricted, these traits are truncated.

iii. Environmental Factors

- Unsustainable initiatives (fewer reasonably priced repair options, society-wide overconsumption and digital consumerism, shorter product lifespans, deficient environmental and recycling laws, and manipulative tactics pushed by large companies like Apple and Microsoft) have adverse environmental impacts, which consequently advance and exacerbate climate change and global warming.
- Electronic waste (e-waste) is now the fastest growing waste stream, accounting for 70% of the toxic waste in North American landfills and posing global health and environmental risks.
- Electronics are made of rare earth metals and minerals that must be extracted from the earth, and that emit destructive toxicants that pollute the air, land, and sea when mined, disposed of, manufactured, and shipped to other countries.
  - Extraction mostly occurs in periphery nations with inadequate or nonexistent environmental protection initiatives and legislation; there, most environmental impacts go unnoticed and developed countries secretly expel their e-waste.
  - Mineral extraction contributes to climate change and global warming, water, air, and soil pollution, deforestation, and erosion, and emits greenhouse gases into the atmosphere, all of which have ramificaitons on entire communities and ecosystems.
- **Human cost:** Lives are risked via occupational and community exposure.
  - **Occupational exposure:** Direct exposure to toxins at work.
    - Miners excavate the land and sea, e-waste scavengers forage through landfills for precious metals and salvageable materials that can be used and reused in new electronics —> Material extraction —> Direct occupational and, by extension, community exposure —> Materials sent to factories in China, Japan, South Korea, the U.S., etc. Workers are directly exposed to toxicants while processing the materials and manufacturing electronic products under unjust working conditions —> Goods shipped
    - 56 to 64 million workers employed in the e-waste sector (23% women, 77% men, 11.9% children. Number of pregnant women unknown) that incinerate, scour, and excavate minerals and e-waste every day, inhaling toxic fumes.
    - Shipping electronics in large container ships emits as much pollution as 50 million cars.
  - **Community exposure:** Indirect and direct exposure in lived communities.
    - Affects everyone, but children and pregnant women are most at risk. Toxicants transmitted via inhalation, ingestion, transplacental exposure, and dermal exposure.
    - **Health issues from repeated toxic exposure:** bone damage, liver damage, lung damage, kidney damage, immune system suppression, allergies, adverse behavioral effects, cancer, growth suppression, etc.
- Developed nations ship their waste abroad – often illegally – in favor of the cheaper e-waste processing and to bypass domestic recycling rules. Developing countries thus sustain the largest environmental burden, many of them becoming e-waste dumpsites (ex. Ghana and Nigeria).
  - The island of Bangka, Indonesia is the epitome of the destruction caused by rampant consumerism, corporate greed, deficient environmental laws, and anti-repair practices (disturbed landscape, no more potable water or crops growing, marine life driven away, etc.).

WHAT HAPPENS NOW?

i. The Individual

- Educate yourself on the topic and stay connected.
  - **Some good repair sources:** iFixit, The Restart Project, U.S. PIRG, Louis Rossmann, and The Repair Association.
- Get your goods repaired at local independent repair stores or pop-ups.
  - **Some nearby repair options:** the London Thing Library, Cellular Magician, TechAlley Computers, Repair Cafe Toronto, Toronto Tool Library, and Kitchener-Waterloo Library of Things.
- Modify your consumption patterns.
  - Consume slowly and in moderation. Do not be so easily persuaded by good advertising and marketing techniques that convince you to replace and consume constantly, conspicuously, and in excess.
  - Keep working items for longer; using them until their lifespan ends and reusing old items will keep them out of landfills for longer, thus reducing waste and e-waste.
  - Do not throw working electronics out if you buy new ones – sell them, donate them, or give them to a friend or family member who needs them.
- Do your research on all products before buying them – understand how and where they are made, their lifespans, and the company's values or practices.
- Buy sustainable alternatives to most products if possible (ex. Fairphone), but beware of greenwashing.
- Call or write to state/province legislators to help fight for your repair rights and legalize repair. Remember that lowering your individual carbon footprint is important and every effort counts, but it is the government and large corporations that should be held accountable, since their actions have the largest impact on the environment and our right to repair.
  - Your voice matters, and action counts. We can use our purchase power and collective organization to pressure companies to support repairability. iFixit reports that 114,322 Americans signed a petition to legalize cellphone unlocking, making the U.S. Copyright Office grant a 3-year exemption to allow unlocking in Oct. 2018.

ii. Governments and Corporations

- Strict legislation should be put in place with regards to repair accessibility, corporations' anti-repair strategies, and waste handling.
- In general, repair and its attendant problems should be taken more seriously, and the inextricable link between repair and the environment should be acknowledged by those in power. Everyone should have the right to repair their own purchased goods – it is convenient, cost-effective, and environmentally friendly.
- Rather than perishable, disposable products with short lifespans, corporations should make more sustainable, durable products with the environment and consumer in mind (products with repairable, reusable, or circular designs, like Adidas' Futurecraft Loop shoe).
- Increased company transparency about product manufacturing and distribution as required by the government (ex. France adding repairability scores to products in stores, or companies releasing unfiltered reports about their carbon footprints and what goes into making their products), making greenwashing illegal in the process.
- Halt or minimize the exportation of waste and e-waste to developing countries. Instead, better (e-)waste disposal methods and stricter (e-)waste laws should be implemented. Waste should be handled locally and responsibly.
- Improved repair accessibility worldwide. More local repair options create more jobs, which fuels the economy in healthy manner. For instance, companies can offer repair themselves (ex. Levi's offers in-store repair workshops). Creating a circular economy will minimize waste delegation and burden on developing countries, ultimately helping to fight climate change and global warming.

iii. Next Research Steps

I will continue to assist Dr. Centivany with her research on the Right to Repair movement as a research assistant this fall 2021. **Some next steps:**

- Continued research on the movement and its progress as the year comes to an end.
- Updating research with more recent statistics.
  - More economic and environmental reports with updated 2020/2021 statistics are set to come out at the end of the year.
- Assisting with events organization, presentation preparation and creation, and notetaking at important events.
  - **Future events:** Fixing Digital Locks (2 Sep. 2021 at 6pm EST), Big Data at the Margins Event (7 and 8 Oct. 2021 at 7-9 pm EST), and the Canadian Repair Summit (28 Oct. 2021, more information forthcoming).
- Continuing to improve and update Dr. Centivany's website, Innovative Deviance Labs (*innovativedeviance.com*), where she stores her academic projects.
- Publishing news articles or academic papers to bring the movement and its attendant problems to the public's attention.
- Conducting more research on the 3 factors above, and on how repair (or lack thereof) affects marginalized and vulnerable communities around the world, with a special focus on how the COVID-19 pandemic's impacts on repair have exacerbated these communities' quality of life (mental and physical health, financial situation, etc.).

KEY TAKEAWAYS

- Threats to repair affect everyone and everything.
  - No one and nothing is excluded from the consequences of not having the ability to repair our things.
- Since corporations took complete authority over repair, profit has taken precedence over goods that were designed to last forever. This has affected us economically (on both a micro and macro level), socially, and environmentally.
- The movement is picking up steam; COVID-19 has unveiled how complicated and troublesome repair has become, and people are beginning to realize that we cannot go on this way if we are to lower rising global temperatures and minimize climate change and global warming's disastrous effects.
- Repair is better for our economies, our health, and the environment. Having the right to repair is essential to maintaining healthy markets and including all consumers, controling or slowing down climate change and global warming, and minimizing e-waste and its negative health effects.
  - Fixing, reusing, and reselling more goods ultimately means that we throw away less, which keeps more products out of waste streams, especially in developing countries.
- We have the power to enact change, but governments and corporations must do their part.

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